

A NEW SPECIES OF *GUATTERIA* (ANNONACEAE) FROM PANAMA

Guatteria jefensis Barringer (Annonaceae) a new species from Cerro Jefe, Panama is distinguished from *G. inuncta* Fries by its smaller, thicker leaves, larger petals, umbonate anthers, and fruits with short thick stipes. It seems to be most closely related to species in section *Tylodiscus* R. E. Fries.

The genus *Guatteria* Ruiz & Pavon consists of about 250 species of neotropical trees and shrubs. Species are found from southern Mexico and the West Indies to Bolivia and southern Brazil, with the greatest density of species in the Amazon basin. The genus is distinguished from other Annonaceae by its axillary flowers with ebracteate pedicels, imbricate petals, anthers with thick, flattened apices, and carpels with solitary basal ovules.

The genus was revised by R. E. Fries (1939), who recognized 212 species. Fries continued to describe new species and by the time he wrote the treatment for the Flora of Panama (Fries, 1962) he recognized nine Panamanian species, only five of which had been included in the revision. After Fries's death, little work was done on the family until Paul Maas and his group at Utrecht began their studies. The difficulty in interpreting Fries's concepts has been a major cause for the decreased interest in the family. Whereas many of Fries's taxa are good, his keys and diagnostic characters are difficult to work with and are sometimes inaccurate. This has caused a buildup of undetermined material in herbaria. The species described here has been in herbaria for over a decade, but has been unrecognized until now.

***Guatteria jefensis* Barringer, sp. nov.** TYPE: Panama. Panama: Cerro Jefe, near radio tower in *Clusia* forest, 3,000 ft., 3 Mar. 1979, B. Hammel 6302 (holotype, MO!).

Guatteria inuncta R. E. Fries affinis sed foliis minoribus, coriaceis, ad basim rotundatis, petalis maioribus, antheris umbonatis, monocarpis et stipitibus maioribus.

Shrub or small tree, 3–4 m tall; young branches sericeous with adpressed yellow-red hairs, glabrescent. Leaves alternate, often distichous; petiole 3–5 mm long thick, black, caniculate above, sericeous when young; lamina ovate, 7–12 cm

long, 3–5 cm wide, coriaceous, stiff, often slightly conduplicate, the base rounded, the apex acute to acuminate, venation pinnate, 10–13 secondary veins per side, secondaries not forming a conspicuous, arching submarginal vein, the tertiary veins obscure, glabrous and sometimes shiny above, sericeous on veins below. Flowers 1–2 per axil on leafless portions of branches or in the axils of older leaves; pedicels 15–18 mm long, articulate 3–5 mm above the base, sericeous, thickened above; sepals 3, rounded-triangular, densely yellow sericeous outside, often slightly sericeous within, the apex obtuse; petals broadly obovate to ovate, 10–15 mm long, 9–15 mm wide, the apex sometimes serrate on older petals, the outer three densely yellow sericeous below and less so above on outer surface, the inner surface with very fine brownish pubescence, the inner three slightly yellow sericeous on outside, with fine brown pubescence near apex on inner surface and dark brown and glabrous at base within; stamens many, 1.5–2 mm long, the apex expanded and flattened, slightly umbonate, the disk plane to slightly convex, pilose between the stamens and the carpels, the hairs concealed by the dense packing of the stamens and styles; carpels many, 2–2.5 mm long, slightly sunken at the center of the disk, the ovule solitary, basal, erect. Monocarps ovoid, obtuse, 10–12 mm long, green turning purple, borne in dense clusters, the stipes thick, 8–12 mm long, red.

Additional specimens examined. PANAMA. Cerro Jefe, 11 Apr. 1977, D'Arcy 11376 (MO); 21.7 km from Panamerican Highway, 22 June 1977, Folsom 3852 (MO, 2); cloud forest, 850–900 m, 1.5 km WNW of weather station, 11 Apr. 1977, Folsom, Skog & D'Arcy 2510 (MO); thick forest near top of Cerro, 13 Sept. 1970, Foster & Kennedy 1897 (MO); summit and along road on E slope, low cloud forest, 5 Apr. 1982, Knapp & Huft 4580 (MO); cloud forest dominated by *Clusia* spp. and *Colpothrinax cookii*, premontane wet forest, along trail on ridge running NE from summit, ca. 100 m, 11 May 1975, Mori & Kallunki 6078 (MO); 5 June 1975, Mori & Kallunki 6501 (MO); 800 m, 10 July 1976, Sullivan 230 (MO); cloud forest, 850–900 m, 1.5 km WNW of weather station, 7 Oct. 1980, Sytsma 1476 (MO); top of Cerro, 3,140 ft., 7 Apr. 1966, Tyson 3593 (MO).

Guatteria jefensis is recognized by its shrubby habit, small, coriaceous leaves, large flowers on older portions of the branches, umbonate an-

thers, and ovoid fruits with short, thick stipes. Also, the leaves are often slightly conduplicate and appear folded on herbarium sheets. It is most easily confused with *G. inuncta* R. E. Fries, the only other shrubby species of *Guatteria* in Panama. *Guatteria inuncta* has larger leaves with cuneate bases, smaller flowers, anthers with flat apices, and fruits on long stipes.

It is often difficult to judge when the flowers have matured. Petals of most *Guatteria* species are never tightly closed in bud. Even when the flowers are quite young, the anthers and stigmas are easily seen. As the flowers mature, the petals enlarge and spread until, at anthesis, the anthers are fully exposed. Flower color changes during the development, gradually turning from green, to yellow and sometimes to a brownish yellow.

According to Fries's (1939) classification, *G. jefensis* should be placed in section *Tylodiscus* R. E. Fries along with *G. dolichopoda* J. D. Smith. *Guatteria jefensis* has the umbonate anthers and

the dark, glabrous patches at the base of the petals that mark that section but does not have fruits borne on slender stipes as found in all species of that section.

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—Kerry Barringer, Department of Botany, Field Museum, Chicago, Illinois 60602-2496.